

High speed drilling of PCB(s) - directing perpendicular cooling jet onto drill bit during drilling and cooling pauses between drilling cycles

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Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4230625	A1	19940317	DE 4230625	A	19920912	199412 B
EP 588244	A2	19940323	EP 93114525	A	19930910	199412
EP 588244	A3	19940608	EP 93114525	A	19930910	199526

Priority Applications (No Type Date): DE 4230625 A 19920912

Cited Patents: 1.Jnl.Ref; DE 3939374; FR 2323496; US 2067676; US 4915550

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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Designated States (Regional): AT CH DE DK FR GB IT LI NL SE

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Abstract (Basic): DE 4230625 A

A jet of a gas or liquid cooling medium is directed onto the drill bit (4) shortly in front of its point of contact with the circuit board to achieve effective cooling and allow shorter pauses between successive drilling cycles.

Pref. the cooling jet is directed onto the drill bit perpendicular to its axis and is maintained during drilling and during the pauses between successive drilling cycles. Liquid nitrogen or carbon dioxide can be used as the cooling medium.

ADVANTAGE - Allows large number of precision bores to be drilled in surface of circuit board in relatively short time.

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Title Terms: HIGH; SPEED; DRILL; PCB; DIRECT; PERPENDICULAR; COOLING; JET; DRILL; BIT; DRILL; COOLING; PAUSE; DRILL; CYCLE

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